COUNTING ROOM TECHNICIAN
JOB PERFORMANCE MEASURE

TASK CODE: CRT-B03

TASK: Calibrate the Alpha Spectroscopy System

NAME: _____ **SSN**: _____

REFERENCES:

1. WP 12-RL1002, Alpha Spectroscopy System Operation
2. WP 12-RL1320, Radioactive Source Control

TERMINAL OBJECTIVE:

Given an alpha spectroscopy system, calibrate the system per WP 12RL1002.

CONSEQUENCES OF INADEQUATE PERFORMANCE:

Improper sample analysis
Component damage

HAZARDS (PERSONNEL/EQUIPMENT STATUS):

None

PRE-REQUISITE TRAINING/ TASK COMPLETION:

1. CF 3.00 Series
2. CRT-B02, Perform Alpha Spectroscopy Preoperational Checks

TOOLS/EQUIPMENT (MATERIALS REQUIRED):

1. Canberra Model 7401/7401VR Alpha Spectroscopy System
2. System Logbook
3. Radioactive Sources

Instructions to Trainee: You shall acquire the necessary references and equipment, and complete all required documentation. Knowledge requirements shall be completed with 80% or greater accuracy. Critical step performance shall be completed with 100% accuracy.

Instructions to JPM Evaluator: The trainee is to perform the terminal objective, without assistance, on the job site. Provide clarification of requirements if requested by the trainee. You are encouraged to ask relevant questions to verify trainee understanding. If the trainee fails this JPM, clearly document the reason for failure and forward to the trainee's manager. Successful completion of this JPM shall be recorded on the trainee's qualification card.

KNOWLEDGE REQUIREMENTS:

Reference	Knowledge Requirement	Pass/Fail
1	State the precautions associated with handling radioactive sources.	
1	State the importance of using a NIST certified alpha source for calibration.	
1	Discuss the expected alpha peaks based on the NIST source being utilized.	
1	Describe the information that must be logged in the system logbook.	
1	Discuss the documentation requirements upon completion of the preoperational checks.	
1	State how to identify a "flagged" parameter on the calibration printout	

PERFORMANCE REQUIREMENTS:

Reference	Performance Requirement	Pass/Fail
2	Obtain and check out the required radioactive source.#	
1	Operate the VAX computer and establish initial conditions for performing alpha spectroscopy system calibration.#	
1	Perform the alpha spectroscopy system calibration.#	
1	Adjust the peak centroids to proper location if not within specified range.#	
1	Document the completion of alpha spectroscopy calibration in the system logbook.#	

# indicates a critical step

FINAL EVALUATION: PASS FAIL

COMMENTS:

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EVALUATOR SIGNATURE: _____ **DATE**:_____

TRAINEE SIGNATURE: _____ **DATE**:_____

MANAGER SIGNATURE: _____ **DATE**:_____